

## CLAIMS

Having fully described an operative embodiment of this invention, what is claimed is:

1. A process for casting and curing sand cores, in which a core box remains in a fixed vertical plane during core formation, said casting and curing further comprising:

filling a movable blow head with sand;

moving the blow head away from the sand hopper towards the core box;

5 positioning the blow head in line with a blow valve;

filling the core box with sand from the blow head, wherein the filling includes applying air pressure to the core box through a blow valve and retracting the blow head.

2. A construction as defined in Claim 1, and including the removal of excess sand from core cavity of the core box by introducing a vacuum manifold and returning the unused vacuumed sand to the sand hopper for use in the next cycle.

3. A construction as defined in Claim 2, and including the application of heat to the sand core by introducing an upper burner manifold.

4. A construction as defined in Claim 3, and including elevation of the cope and core of the core box away from the drag of the core box.

5. A construction as defined in Claim 4, and transferring the cope and core to a core unloader table, by lowering the cope and core onto the loader transfer arms and laterally translating the cope and core to the core unloader table.

6. A construction as defined in Claim 5, and including removal of the core from the cope onto the core unloader table.